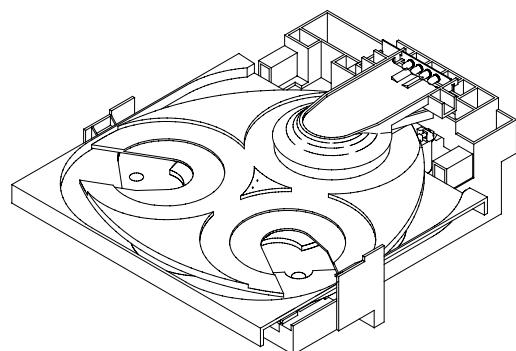




**AZG-1**

English



# SERVICE MANUAL

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CD-R/RW MECHANISM

---

BASIC CD MECHANISM:KSM-880CAB

---

TYPE
ZD8RD
YZD8RMDJM
ZD8RMDJM
ZD8RNDF
YKZD8RDF
ZD8RDM
YZD8RDM
ZD8RN1DM
YZD8RDJM

**aiwa**  
S/M Code No. 09-001-335-3N6

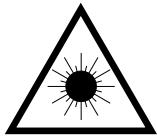


## PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

### WARNING!

WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.



- Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
- Advarsel: Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

### VAROITUS!

Laiteen Käyttäminen muulla kuin tässä käytöohjeessa mainitulla tavalla saattaa altistaa käyt-täjän turvallisuusluokan 1 ylit-täälle näkymättömälle lasersäteilylle.

### VARNING!

Om apparaten används på annat sätt än vad som specificeras i denna bruksanvisning, kan användaren utsättas för osynlig laserstrålning, som överskrider gränsen för laserklass 1.

### CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

### ATTENTION

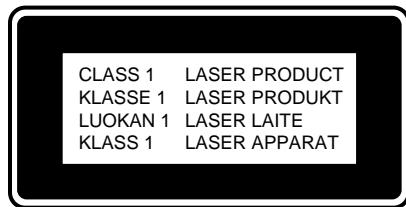
L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

### ADVARSEL!

Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

This Compact Disc player is classified as a CLASS 1 LASER product.

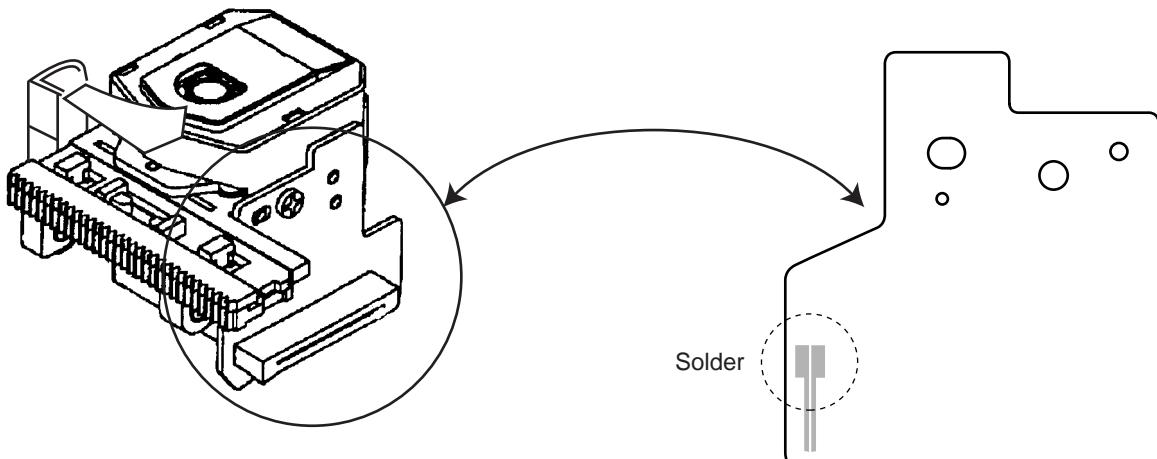
The CLASS 1 LASER PRODUCT label is located on the rear exterior.



### Precaution to replace Optical block

Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use care the clothes do not touch the diode.

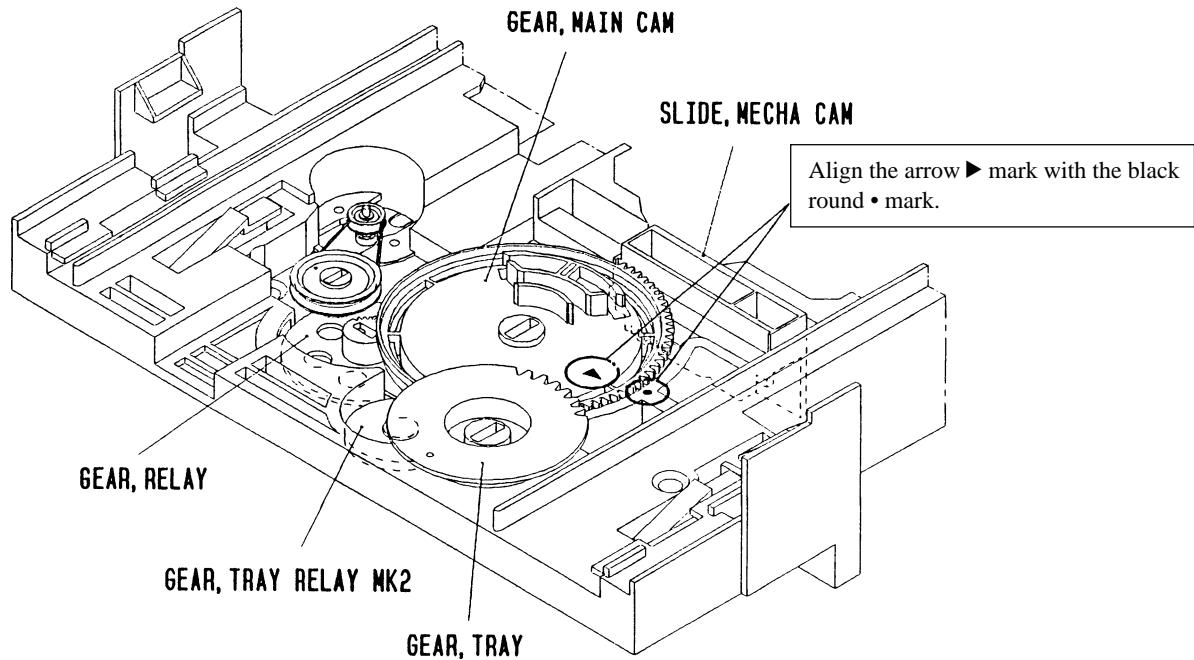
- 1) After the connection, remove solder shown in the figure below.



## How to Adjust the Rotating Phase of the Gear, Main Cam

- 1) Push down the hooking catch of the CHAS. MECH, and remove the TRAY.
- 2) Align the arrow mark of the Gear, Main Cam with the black round mark of the CHAS, MECHA as shown below.
- 3) Confirm that the Slide, Mech Cam is located in the right position, then insert the TRAY gently.

**Caution:** If the rotating phase of the Gear, Main Cam is incorrectly adjusted, the chucking operation and tray movement will have malfunction.



## ELECTRICAL MAIN PARTS LIST

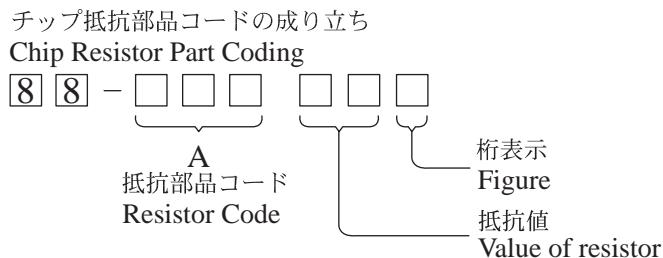
DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。  
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
IC				C109	87-010-992-080	C-CAP,S 0.047-25 B	
	87-A21-381-040	C-IC,LA9235M		C110	87-010-196-080	CHIP CAPACITOR,0.1-25 <YKZD88RDF,ZD8RD>	
	87-A21-556-010	C-IC,LC78641E		C110	87-010-196-020	CHIP CAPACITOR,0.1-25 <EXCEPT YKZD88RDF,ZD8RD>	
	87-A21-414-010	IC,BA5927S		C111	87-010-260-080	CAP, ELECT 47-25V	
TRANSISTOR				C112	87-010-197-020	CHIP CAPACITOR,0.01-25 <EXCEPT YKZD88RDF,ZD8RD>	
	87-026-609-080	TR,KTA1266GR		C112	87-010-197-080	CHIP CAPACITOR,0.01-25 <YKZD88RDF,ZD8RD>	
	87-A30-076-080	C-TR,2SC3052F		C114	87-010-260-080	CAP, ELECT 47-25V	
	87-A30-497-080	TR,2SA1980Y/G		C115	87-010-197-080	CHIP CAPACITOR,0.01-25 <YKZD88RDF,ZD8RD>	
	87-A30-087-080	C-FET,2SK2158		C115	87-010-197-020	CHIP CAPACITOR,0.01-25 <EXCEPT YKZD88RDF,ZD8RD>	
	87-026-237-080	CHIP-TR,DTC124XK <EXCEPT ZD8RN1DM,YZD8RDM>		C116	87-010-260-080	CAP, ELECT 47-25V	
	87-A30-075-080	C-TR,2SA1235F		C117	87-010-197-080	CHIP CAPACITOR,0.01-25 <YKZD88RDF,ZD8RD>	
DIODE				C117	87-010-197-020	CHIP CAPACITOR,0.01-25 <EXCEPT YKZD88RDF,ZD8RD>	
	87-A40-270-080	C-DIODE,MC2838		C118	87-010-260-080	CAP, ELECT 47-25V	
	87-070-136-080	ZENER,MTZJ5.1B		C119	87-015-819-080	CHIP CAPACITOR,0.01-25 <YKZD88RDF,ZD8RD>	
	87-A40-003-080	ZENER,MTZJ4.3A		C120	87-010-312-080	C-CAP,S 15P-50 CH <YKZD88RDF,ZD8RD>	
	87-A40-337-080	ZENER,MTZJ6.8B		C120	87-010-312-020	C-CAP,S 15P-50 CH <EXCEPT YKZD88RDF,ZD8RD>	
	87-A40-313-080	C-DIODE,MC2840		C121	87-010-312-020	C-CAP,S 15P-50 CH <EXCEPT YKZD88RDF,ZD8RD>	
3CD C.B				C121	87-010-312-080	C-CAP,S 15P-50 CH <YKZD88RDF,ZD8RD>	
C1	87-010-374-080	CAP,E 47-10		C122	87-010-404-080	CAP, ELECT 4.7-50V	
C2	87-010-196-020	CHIP CAPACITOR,0.1-25 <EXCEPT YKZD88RDF,ZD8RD>		C123	87-010-197-020	CHIP CAPACITOR,0.01-25 <EXCEPT YKZD88RDF,ZD8RD>	
C2	87-010-196-080	CHIP CAPACITOR,0.1-25 <YKZD88RDF,ZD8RD>		C123	87-010-197-080	CHIP CAPACITOR,0.01-25 <EXCEPT YKZD88RDF,ZD8RD>	
C3	87-010-260-080	CAP, ELECT 47-25V		C124	87-010-401-080	CAP, ELECT 1-50V	
C4	87-010-260-080	CAP, ELECT 47-25V		C126	87-010-196-020	CHIP CAPACITOR,0.1-25 <EXCEPT YKZD88RDF,ZD8RD>	
C5	87-010-197-020	CHIP CAPACITOR,0.01-25 <EXCEPT YKZD88RDF,ZD8RD>		C126	87-010-196-080	CHIP CAPACITOR,0.1-25 <YKZD88RDF,ZD8RD>	
C5	87-010-197-080	CHIP CAPACITOR,0.01-25 <YKZD88RDF,ZD8RD>		C128	87-010-196-020	CHIP CAPACITOR,0.1-25 <EXCEPT YKZD88RDF,ZD8RD>	
C6	87-010-405-080	CAP, ELECT 10-50V		C128	87-010-196-080	CHIP CAPACITOR,0.1-25 <YKZD88RDF,ZD8RD>	
C7	87-010-263-080	CAP, ELECT 100-10V		C128	87-010-196-020	CHIP CAPACITOR,0.1-25 <EXCEPT YKZD88RDF,ZD8RD>	
C8	87-012-349-080	C-CAP,S 1000P-50 CH		C128	87-010-196-080	CHIP CAPACITOR,0.1-25 <EXCEPT YKZD88RDF,ZD8RD>	
C10	87-010-546-080	CAP,E 0.33-50		C128	87-010-196-080	CHIP CAPACITOR,0.1-25 <YKZD88RDF,ZD8RD>	
C11	87-010-401-080	CAP, ELECT 1-50V		C130	87-010-196-080	CHIP CAPACITOR,0.1-25 <YKZD88RDF,ZD8RD>	
C13	87-010-321-020	C-CAP,S 82P-50 CH <EXCEPT YKZD88RDF,ZD8RD>		C130	87-010-196-020	CHIP CAPACITOR,0.1-25 <EXCEPT YKZD88RDF,ZD8RD>	
C13	87-010-321-080	C-CAP,S 82P-50 J CH <YKZD88RDF,ZD8RD>		C132	87-010-405-080	CAP, ELECT 10-50V	
C15	87-010-197-020	CHIP CAPACITOR,0.01-25 <EXCEPT YKZD88RDF,ZD8RD>		C132	87-010-314-020	C-CAP,S 22P-50V <EXCEPT YKZD88RDF,ZD8RD>	
C15	87-010-197-080	CHIP CAPACITOR,0.01-25 <YKZD88RDF,ZD8RD>		C133	87-010-314-080	C-CAP,S 22P-50V<YKZD88RDF,ZD8RD>	
C16	87-010-260-080	CAP, ELECT 47-25V		C135	87-A11-088-080	CAP, TC U 100P-50 J CH	
C101	87-010-992-080	C-CAP,S 0.047-25 B		C151	87-010-405-080	CAP, ELECT 10-50V	
C102	87-010-401-080	CAP, ELECT 1-50V		C152	87-010-405-080	CAP, ELECT 10-50V	
C103	87-010-196-020	CHIP CAPACITOR,0.1-25 <EXCEPT YKZD88RDF,ZD8RD>		C192	87-012-349-080	C-CAP,S 1000P-50 CH	
C103	87-010-196-080	CHIP CAPACITOR,0.1-25 <YKZD88RDF,ZD8RD>		C193	87-010-196-080	CHIP CAPACITOR,0.1-25 <YKZD88RDF,ZD8RD>	
C104	87-010-196-020	CHIP CAPACITOR,0.1-25 <EXCEPT YKZD88RDF,ZD8RD>		C193	87-010-196-020	CHIP CAPACITOR,0.1-25 <EXCEPT YKZD88RDF,ZD8RD>	
C104	87-010-196-080	CHIP CAPACITOR,0.1-25 <YKZD88RDF,ZD8RD>		C201	87-A10-730-080	CAP,E 1000-16 SMG	
C105	87-010-260-080	CAP, ELECT 47-25V		C202	87-010-196-080	CHIP CAPACITOR,0.1-25 <YKZD88RDF,ZD8RD>	
C106	87-010-322-020	C-CAP,S 100P-50 CH <EXCEPT YKZD88RDF,ZD8RD>		C202	87-010-196-020	CHIP CAPACITOR,0.1-25 <EXCEPT YKZD88RDF,ZD8RD>	
C106	87-010-322-080	C-CAP,S 100P-50 CH <YKZD88RDF,ZD8RD>		C204	87-010-196-020	CHIP CAPACITOR,0.1-25 <EXCEPT YKZD88RDF,ZD8RD>	
C107	87-010-196-020	CHIP CAPACITOR,0.1-25 <EXCEPT YKZD88RDF,ZD8RD>		C204	87-010-196-080	CHIP CAPACITOR,0.1-25 <YKZD88RDF,ZD8RD>	
C107	87-010-196-080	CHIP CAPACITOR,0.1-25 <YKZD88RDF,ZD8RD>		C205	87-010-405-080	CAP, ELECT 10-50V	
C108	87-010-186-080	CAP,CHIP 4700P<YKZD88RDF,ZD8RD>		C206	87-010-405-080	CAP, ELECT 10-50V	
C108	87-010-186-020	CAP,CHIP 4700P <EXCEPT YKZD88RDF,ZD8RD>		C207	87-010-196-020	CHIP CAPACITOR,0.1-25 <EXCEPT YKZD88RDF,ZD8RD>	

REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C207	87-010-196-080		CHIP CAPACITOR, 0.1-25 <YKZD88RDF, ZD8RD>	CN202	87-A60-130-010		CONN, 5P V
C301	87-010-382-080		CAP, ELECT 22-25V	CN501	84-ZG1-647-010		CONN ASSY, 2P <EXCEPT ZD8RN1DM, ZD8RNDM>
C302	87-010-196-020		CHIP CAPACITOR, 0.1-25 <EXCEPT YKZD88RDF, ZD8RD>	CN601	87-009-345-010		CONN, 2P PH V <EXCEPT ZD8RN1DM, ZD8RDM, YZD8RDM, ZD8RNDM>
C302	87-010-196-080		CHIP CAPACITOR, 0.1-25 <YKZD88RDF, ZD8RD>	CON401	87-099-030-010		CONN, 13P 6216H
C303	87-010-260-080		CAP, ELECT 47-25V	FB601	87-008-372-080		FLTR, EMI BL01 RNI <EXCEPT ZD8RN1DM, ZD8RDM, YZD8RDM, ZD8RNDM>
C401	87-010-322-020		C-CAP, S 100P-50 CH <EXCEPT YKZD88RDF, ZD8RD>	FB602	87-008-372-080		FLTR, EMI BL01 RNI
C401	87-010-322-080		C-CAP, S 100P-50 CH <YKZD88RDF, ZD8RD>	LED601	87-A40-558-010		LED, SLZ-8128A-01-A
C402	87-010-322-020		C-CAP, S 100P-50 CH <EXCEPT YKZD88RDF, ZD8RD>	M201	87-045-305-010		MOTOR, RF-500TB DC-5V (2MA)
C402	87-010-322-080		C-CAP, S 100P-50 CH <YKZD88RDF, ZD8RD>	SW201	87-036-109-010		SW, MICRO SPPB61
C403	87-010-322-020		C-CAP, S 100P-50 CH <EXCEPT YKZD88RDF, ZD8RD>	SW202	87-036-109-010		SW, MICRO SPPB61
C403	87-010-322-080		C-CAP, S 100P-50 CH <YKZD88RDF, ZD8RD>	X101	87-A70-046-010		VIB, XTAL 16.934MHZ
C403	87-010-322-020		C-CAP, S 100P-50 CH <EXCEPT YKZD88RDF, ZD8RD>	LED. C.B			
C404	87-010-322-080		C-CAP, S 100P-50 CH <YKZD88RDF, ZD8RD>	LED501	87-A40-263-080		LED, SLH-56PCT31 GRN <EXCEPT ZD8RN1DM, ZD8RNDM>
C404	87-010-322-020		C-CAP, S 100P-50 CH <EXCEPT YKZD88RDF, ZD8RD>	LED502	87-A40-263-080		LED, SLH-56PCT31 GRN <EXCEPT ZD8RN1DM, ZD8RNDM>
C405	87-010-322-020		C-CAP, S 100P-50 CH <EXCEPT YKZD88RDF, ZD8RD>	LED503	87-A40-268-080		LED, SLH-56DCT31 ORN <EXCEPT ZD8RN1DM, ZD8RNDM>
C405	87-010-322-080		C-CAP, S 100P-50 CH <YKZD88RDF, ZD8RD>	LED504	87-A40-268-080		LED, SLH-56DCT31 ORN <EXCEPT ZD8RN1DM, ZD8RNDM>
C406	87-010-322-020		C-CAP, S 100P-50 CH <EXCEPT YKZD88RDF, ZD8RD>	T-T C.B			
C406	87-010-322-080		C-CAP, S 100P-50 CH <YKZD88RDF, ZD8RD>	C401	87-018-214-080		CAP TC U 0.1-50F
C407	87-010-405-080		CAP, ELECT 10-50V	CON401	86-NFZ-675-010		CONN, 5P H 6216-11H
C454	87-010-196-020		CHIP CAPACITOR, 0.1-25 <EXCEPT YKZD88RDF, ZD8RD>	M401	87-045-364-010		MOTOR(BCH3B14)
C454	87-010-196-080		CHIP CAPACITOR, 0.1-25 <YKZD88RDF, ZD8RD>	PS401	87-026-573-010		SNSR, PHOTO GP1S53V
C601	87-010-260-080		CAP, ELECT 47-25V	MOTOR C.B			
C602	87-010-196-080		CHIP CAPACITOR, 0.1-25 <YKZD88RDF, ZD8RD>	PIN3	91-564-722-110		CONN, PIN 6P
C602	87-010-196-020		CHIP CAPACITOR, 0.1-25 <EXCEPT YKZD88RDF, ZD8RD>	SW1	91-572-085-110		LEAF SWITCH
CN1	87-A60-429-010		CONN, 16P H TOC-A				
CN201	84-ZG1-648-010		CONN ASSY, 6P				

- Regarding connectors, they are not stocked as they are not the initial order items.  
The connectors are available after they are supplied from connector manufacturers upon the order is received.

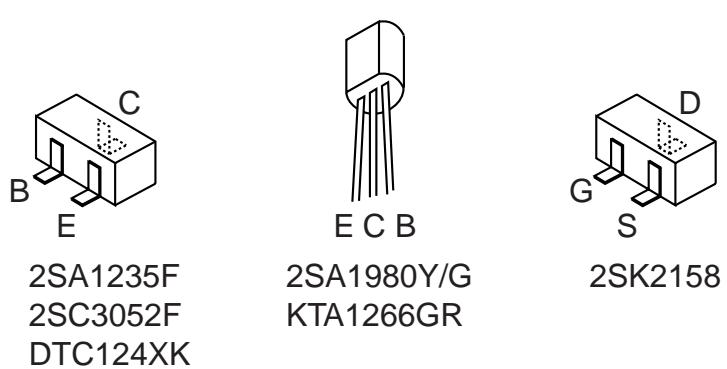
#### ○チップ抵抗部品コード／CHIP RESISTOR PART CODE



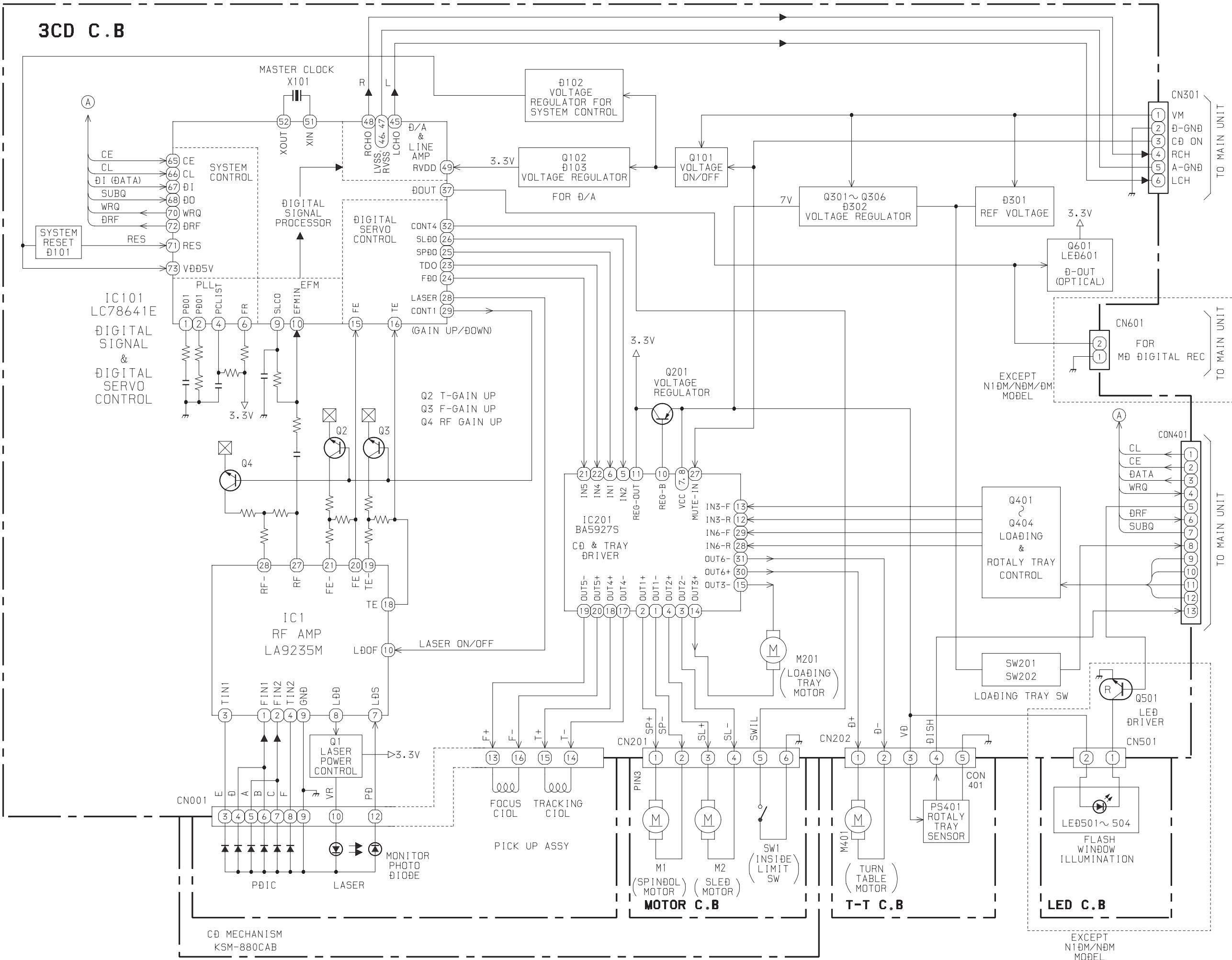
チップ抵抗  
Chip resistor

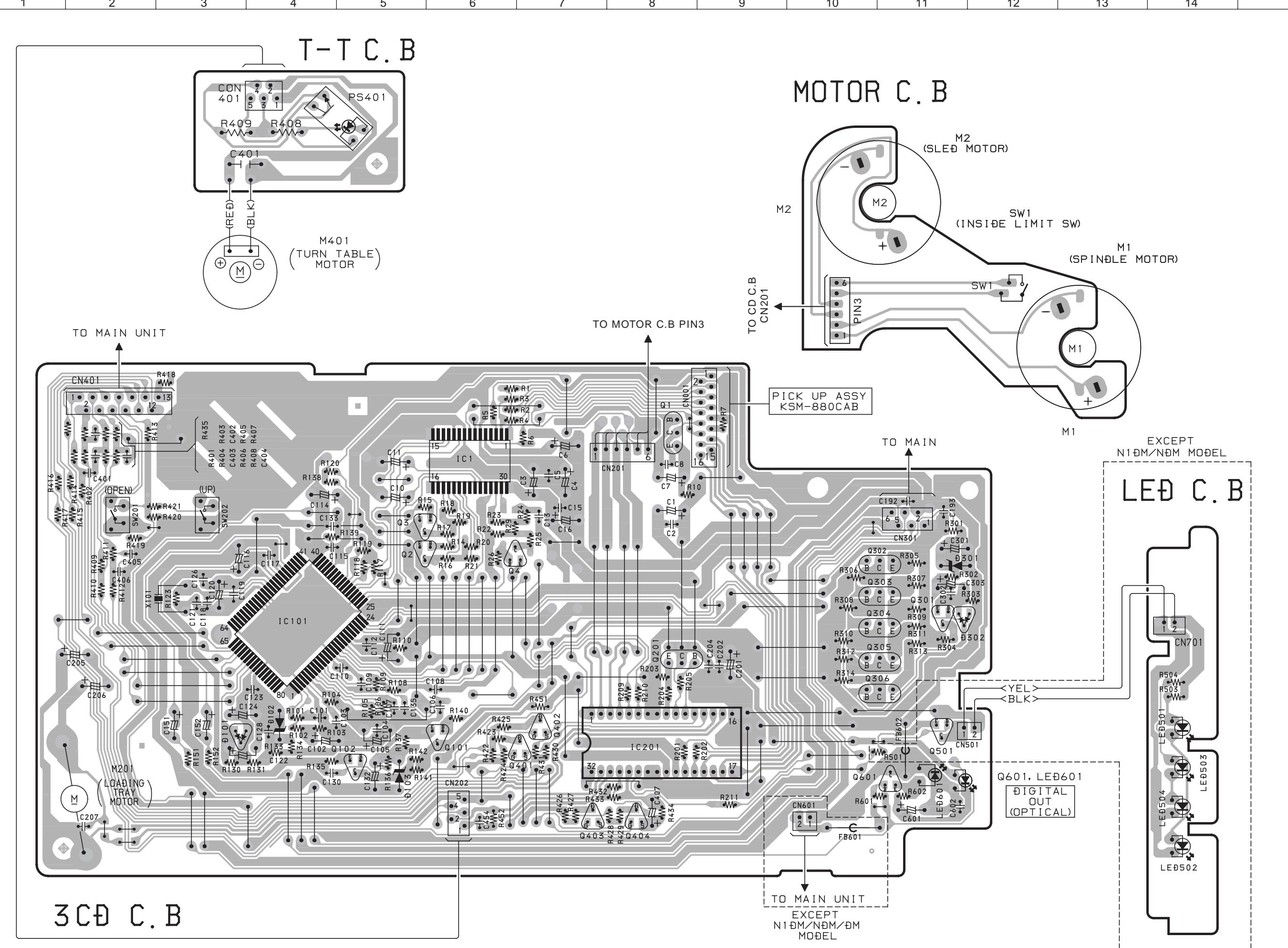
容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法／Dimensions (mm)			抵抗コード : A Resistor Code : A
				外形／Form	L	W	
1/16W	1005	± 5%	CJ		1.0	0.5	0.35 104
1/16W	1608	± 5%	CJ		1.6	0.8	0.45 108
1/10W	2125	± 5%	CJ		2	1.25	0.45 118
1/8W	3216	± 5%	CJ		3.2	1.6	0.55 128

## TRANSISTOR ILLUSTRATION

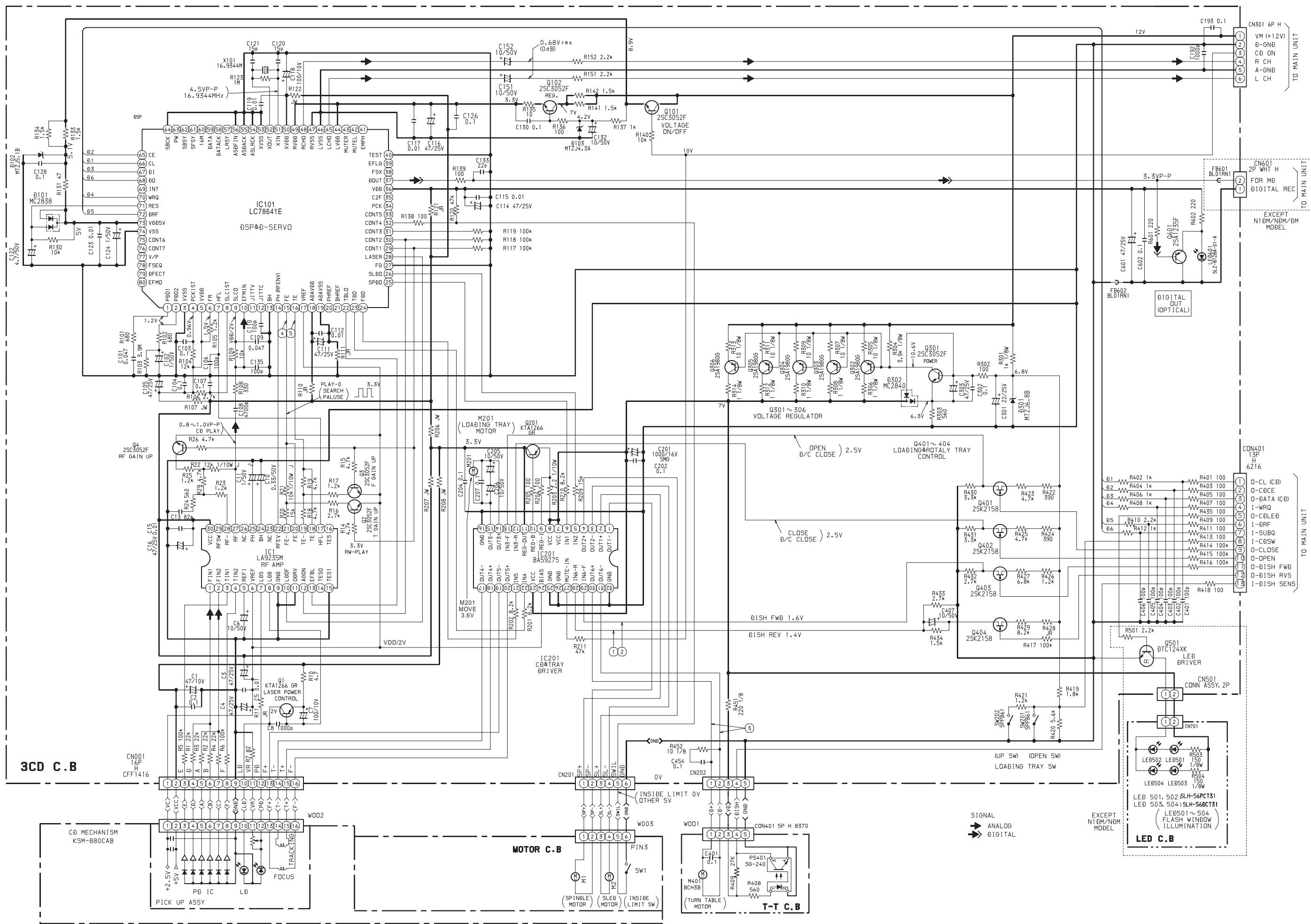


# BLOCK DIAGRAM





## SCHEMATIC DIAGRAM



## TEST MODE

### 1. How to Start the CD Test Mode

While pressing the CD function key, connect the AC power plug to wall outlet.

The test mode starts up and "CD TEST" appears on the display.

### 2. How to Exit the CD Test Mode

Press the POWER button or disconnect the AC power plug from wall outlet.

\* When any function key other than PLAY is pressed during playback, the test mode is canceled.

### 3. Function and Use of the CD Test Mode

NO	MODE	How to enter the mode	Display	Operation	Check item
1	Start mode		All indicators turn on	<ul style="list-style-type: none"> <li>• All FL all indicators turn on</li> </ul>	<ul style="list-style-type: none"> <li>• FL check</li> <li>• Microprocessor check</li> </ul>
2	Search mode	STOP button	CD	<ul style="list-style-type: none"> <li>• LD turns on all the time</li> <li>• Focus search continuous operation *1</li> <li>• Spindle motor continuous kick</li> </ul>	<ul style="list-style-type: none"> <li>• APC circuit check</li> <li>• Laser current measurement</li> <li>• Focus search waveform check</li> <li>• Focus error waveform check (Ignores DRF during search mode)</li> </ul>
3	Play mode	PLAY button	Normal	<ul style="list-style-type: none"> <li>• Normal playback</li> <li>• Focus search is continued if failed in TOC READ.</li> </ul>	<ul style="list-style-type: none"> <li>• Each servo circuit is checked</li> <li>• DRF check</li> </ul>
4	Traverse mode	PAUSE button	Normal	<ul style="list-style-type: none"> <li>• Tracking servo OFF/ON</li> <li>Repeats OFF/ON every time the PAUSE button is pressed</li> </ul>	• Tracking balance check
5	Sled mode	FF button	CD TEST	<ul style="list-style-type: none"> <li>• Moves PU to inner circumference *2</li> <li>Kicks the lens to inner circumference at the same time</li> </ul>	<ul style="list-style-type: none"> <li>• Sled circuit check</li> <li>• Tracking circuit check</li> <li>• Mechanism operation check</li> <li>• PU check</li> </ul>
		RWD button	CD TEST	<ul style="list-style-type: none"> <li>• Moves PU to outer circumference *2</li> <li>Kicks the lens to outer circumference at the same time</li> </ul>	
6	Spindle mode	TAPE REC button	All indicators turn on	<ul style="list-style-type: none"> <li>• Pressing the button once rotates the spindle motor in the normal direction (rough speed). Pressing the button again rotates it in the reverse direction. Pressing it again stops the motor</li> </ul>	<ul style="list-style-type: none"> <li>• Spindle circuit check</li> <li>• Spindle motor check</li> </ul>
7	RF AGC mode	TUNER button	AGC ON/OFF	<ul style="list-style-type: none"> <li>• Repeats ON/OFF every time the TUNER button is pressed</li> </ul>	<ul style="list-style-type: none"> <li>• PU good or defective check</li> <li>• RF AMP circuit check</li> </ul>

\*1 ..... When the focus search keeps running for 10 minutes or longer continuously, the driver IC heats up, and the protective circuit works so that the machine may stops operating.

In this case, turn off the main power, wait for a while and restart the machine.

\*2 ..... Do not keep pressing the FF or RWD button while the pickup is located at the innermost or outermost circumference because the gear can be damaged as the sled motor keeps rotating.

### 4. Automatic Adjustment Result Display

The automatic adjustment values of the focus and the tracking can be displayed.

#### 4-1. Automatic Adjustment Result Display of Focus Offset Cancel/Gain

- 1) Enter the start mode (all indicators turn on).
- 2) Press the TAPE button to display "F\*\*" and set each of the adjustment item to either ON or OFF. (Refer to the following table.)
- 3) Press the PLAY button to play back the CD.
- 4) Press the CD button.
- 5) The automatic adjustment value "F\*\* \*\*" is displayed. (Refer to the following table.)
- 6) Upon completion of check, press the CD button twice to return to the play mode.

Adjustment item (ON = 1, OFF = 0)			Automatic adjustment value display (Asterisk * means hexadecimal display.)			
F	OFFSET	GAIN	F	OFFSET	—	GAIN
F	0	0	F	Not displayed	Not displayed	Not displayed
F	1	1	F	**	Not displayed	**
F	1	0	F	**	Not displayed	Not displayed
F	0	1	F	Not displayed	Not displayed	**

#### 4-2. Automatic Adjustment Result Display of Tracking Offset Cancel/Balance/Gain

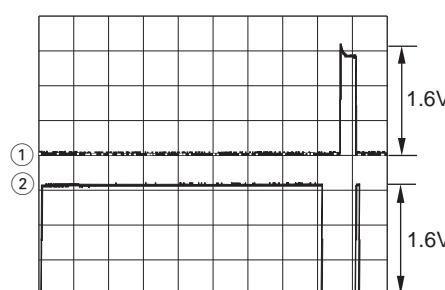
- 1) Enter the start mode (all indicators turn on).
- 2) Press the AUX button to display "T\*\*\*" and set each adjustment item to either ON or OFF. (Refer to the following table.)
- 3) Press the PLAY button to play back the CD.
- 4) Press the CD button twice.
- 5) The automatic adjustment value "T\*\*\*\*\*" is displayed. (Refer to the following table.)
- 6) Upon completion of check, press the CD button to return to the play mode.

Adjustment item (ON = 1, OFF = 0)				Automatic adjustment value display (Asterisk * means hexadecimal display.)			
T	OFFSET	BALANCE	GAIN	T	OFFSET	BALANCE	GAIN
T	0	0	0	T	Not displayed	Not displayed	Not displayed
T	1	1	1	T	**	**	**
T	1	1	0	T	**	**	Not displayed
T	1	0	1	T	**	Not displayed	**
T	1	0	0	T	**	Not displayed	Not displayed
T	0	1	1	T	Not displayed	**	**
T	0	1	0	T	Not displayed	**	Not displayed
T	0	0	1	T	Not displayed	Not displayed	**

## WAVE FORM

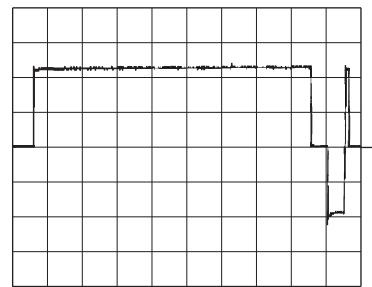
① IC201 ②8 (IN6-R)

VOLT/DIV: 500mV  
TIME/DIV: 200mS



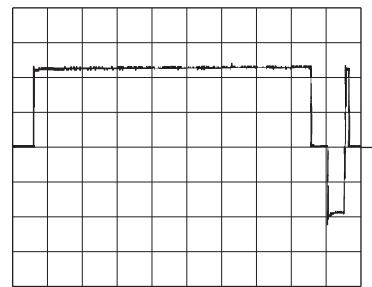
② IC201 ②9 (IN6-F)

VOLT/DIV: 500mV  
TIME/DIV: 200mS



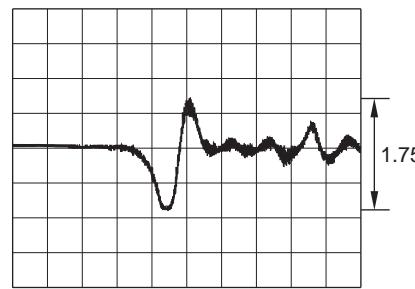
③ Between CN202 ① and ② (② Pin: 0 Level)

VOLT/DIV: 1V  
TIME/DIV: 200mS



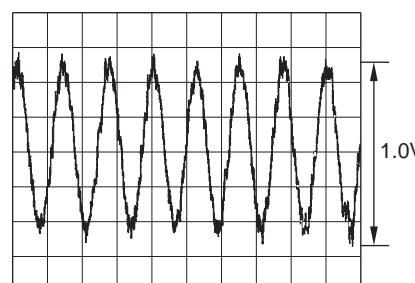
④ IC101 ⑯ (FE)

VOLT/DIV: 500mV  
TIME/DIV: 2mS



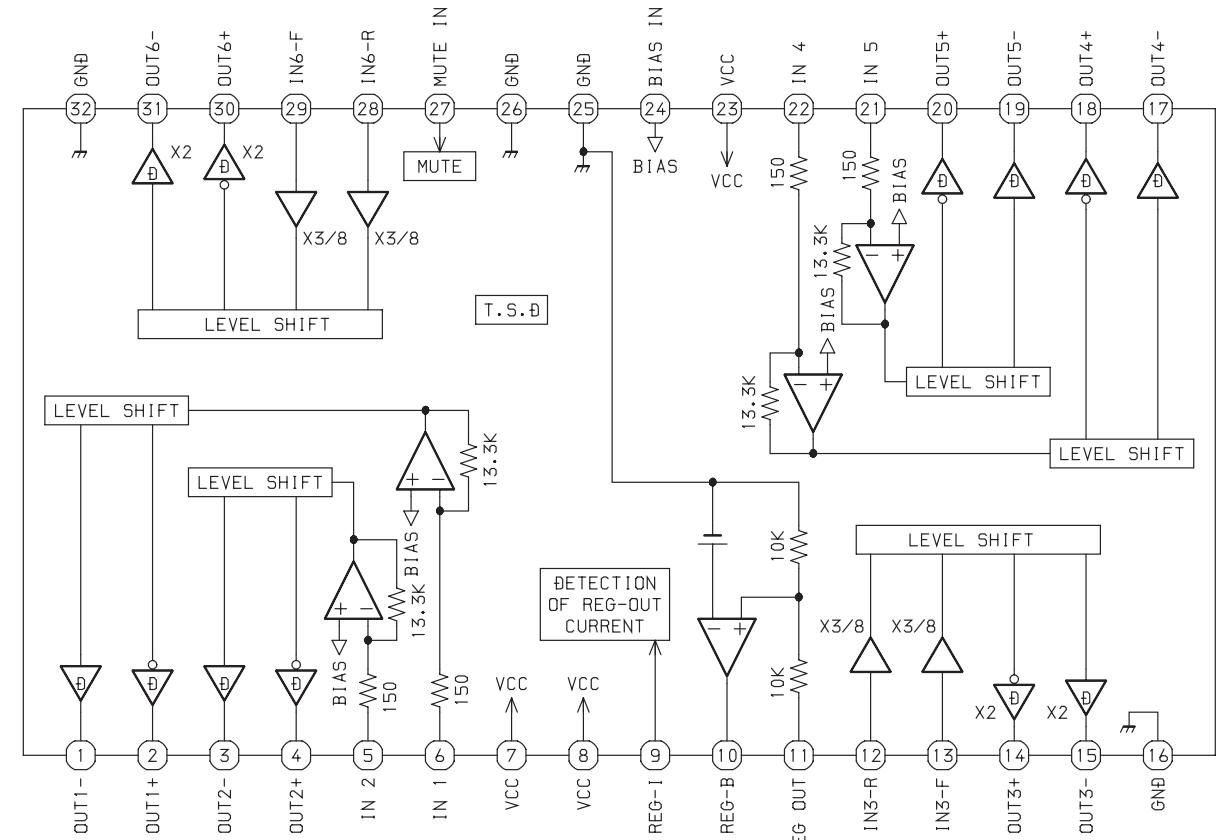
⑤ IC101 ⑯ (TE)

VOLT/DIV: 200mV  
TIME/DIV: 200μS

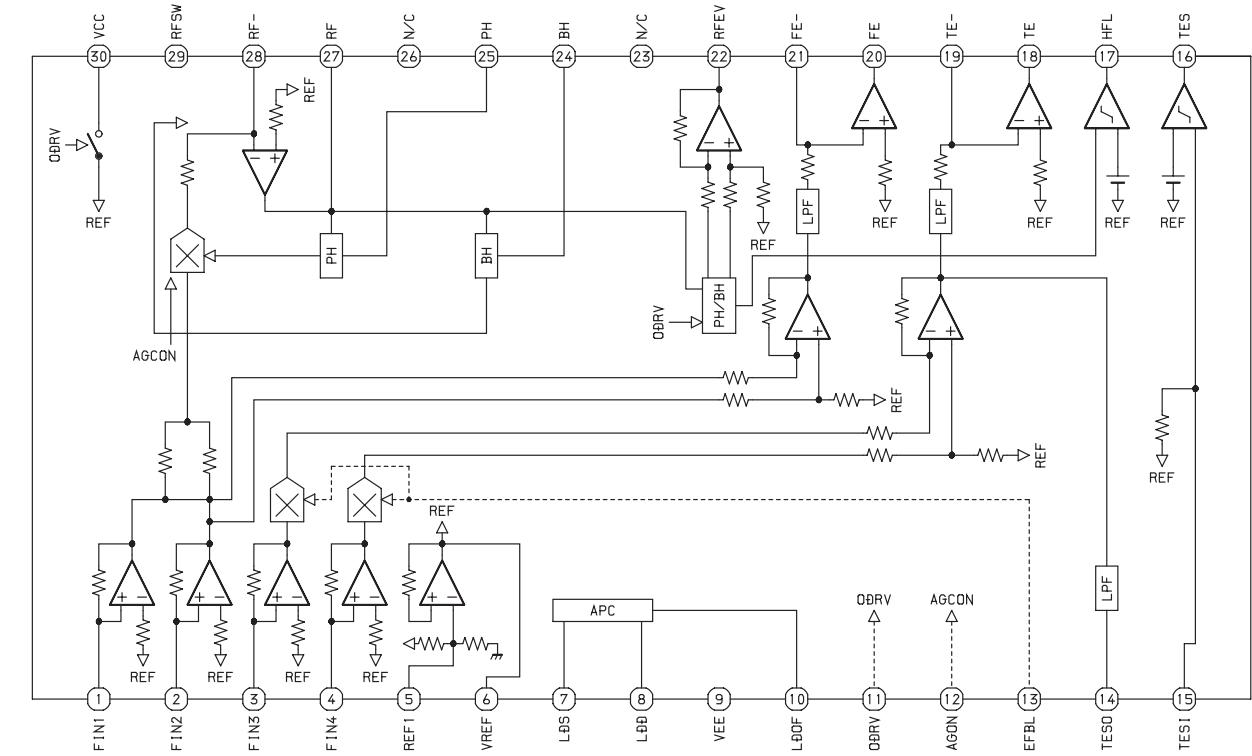


## IC BLOCK DIAGRAM

IC, BA5927S



## IC, LA9235M



## IC DESCRIPTION

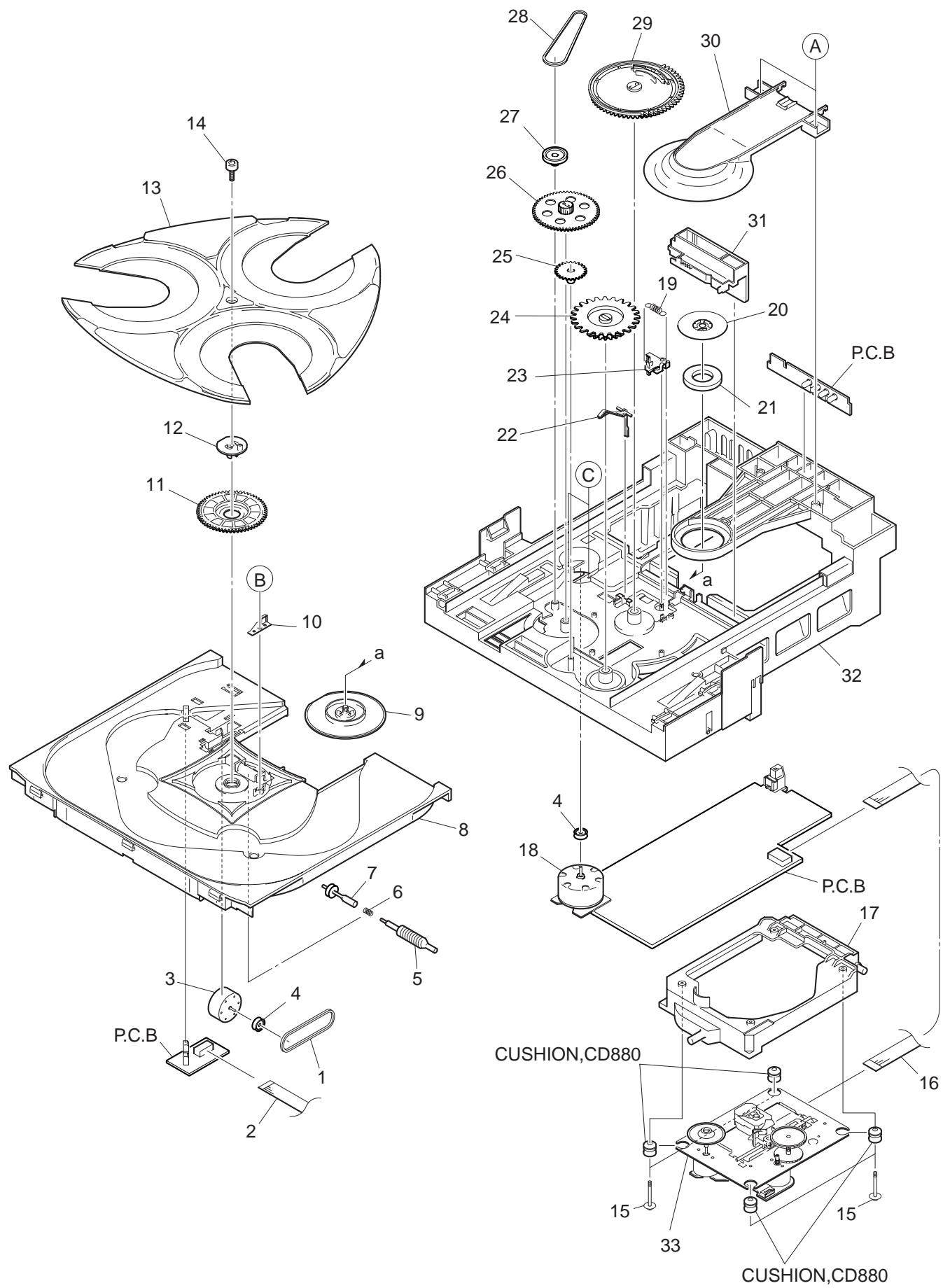
### IC, LC78641E

Pin No.	Pin Name	I/O	Description
1	PDO1	O	Internal VCO control phase comparator output pin. (Pull down)
2	PDO2	O	Internal VCO control phase comparator output pin. OFF for rough servo, ON for phase servo. (Pull down)
3	VVSS	—	Internal VCO ground pin.
4	PCKIST	—	PDO output current adjustment resistor connection pin.
5	VVDD	—	Internal VCO power supply pin.
6	FR	—	VCO frequency range adjustment resistor connection pin. (Pull up)
7	HFL	I	Mirror detection signal input pin.
8	SLCIST	—	SLCO output current adjustment resistor connection pin.
9	SLCO	O	Control output.
10	EFMIN	I	EFM signal input pin.
11	JITTV	O	Jitter detection monitor pin.
12	JITTC	O	Jitter detection adjustment pin. (Pull down)
13	BH	I	BH signal input pin. (Connected to GND)
14	PH (RFENV)	I	PH signal or RFENV signal input pin.
15	FE	I	FE signal input pin.
16	TE	I	TE signal input pin.
17	VREF	I	VREF input pin.
18	ADAVDD	—	Servo A/D, D/A power supply pin.
19	ADAVSS	—	Servo A/D, D/A ground pin.
20	PHREF	O	PH reference output pin. (Not connected)
21	BHREF	O	BH reference output pin. (Not connected)
22	TBLO	O	Tracking balance output pin.
23	TDO	O	Tracking control output pin.
24	FDO	O	Focus control output pin.
25	SPDO	O	Spindle control output pin.
26	SLDO	O	Thread control output pin.
27	DVREF/FG	I/O	Output driver VREF output pin. FG signal input pin. (Connected to GND)
28	LASER	O	Laser ON/OFF control pin.
29	CONT1	I/O	General-purpose input/output pin 1. (Connected to GND)
30	CONT2	I/O	General-purpose input/output pin 2. (Connected to GND)
31	CONT3	I/O	General-purpose input/output pin 3. (Connected to GND)
32	CONT4	I/O	General-purpose input/output pin 4.
33	CONT5	I/O	General-purpose input/output pin 5. (Not connected)
34	PCK	O	EFM data playback clock monitor pin. Average 4.3218MHz when the phase is locked. (Not connected)
35	C2F	O	C2 flag output pin. (Not connected)
36	VDD	—	Digital power supply pin.
37	DOUT	O	Digital out output pin. (EIAJ format)
38	FSX	O	Output pin for the 7.35kHz synchronization signal divided from the crystal oscillator. (Not connected)

Pin No.	Pin Name	I/O	Description
39	EFLG	O	C1, C2 error correction monitor pin. (Not connected)
40	TEST	I	Test input pin. (Connected to GND)
41	EMPH	I/O	Emphasis pin. Which becomes an input pin after reset and can be controlled externally. This becomes an emphasis monitor pin under control by command. (Not connected)
42	MUTEL	O	L channel mute output pin. (Not connected)
43	MUTER	O	R channel mute output pin. (Not connected)
44	LVDD	—	L channel power supply pin.
45	LCHO	O	L channel output pin.
46	LVSS	—	L channel ground pin.
47	RVSS	—	R channel ground pin.
48	RCHO	O	R channel output pin.
49	RVDD	—	R channel power supply pin.
50	XVDD	—	Crystal oscillator power supply pin.
51	XIN	I	Connections for a 16.9344MHz crystal oscillator pin.
52	XOUT	O	
53	XVSS	—	Crystal oscillator ground pin.
54	ASLRCK	I	L/R clock input pin. (Connected to GND)
55	ASDACK	I	Bit clock input pin. (Connected to GND)
56	ASDFIN	I	L/R channel data input pin. (Connected to GND)
57	LRSY	O	L/R clock output pin. (Not connected)
58	DATACK	O	Bit clock output pin. (Not connected)
59	DATA	O	L/R channel data output pin. (Not connected)
60	16M	O	16.9344MHz output pin. (Not connected)
61	SFSY	O	Subcode frame synchronization signal output pin. This signal falls when the subcode is in the standby state. (Not connected)
62	SBSY	O	Subcode clock synchronization signal output pin. (Not connected)
63	PW	O	Subcode P, Q, R, S, T, U and W output pin. (Not connected)
64	SBCK	I	Subcode readout clock input pin. (Connected to GND)
65	CE	I	Chip enable signal input pin.
66	CL	I	Data transfer clock input pin.
67	DI	I	Data input pin.
68	DO	O	Data output pin.
69	INT	O	Interruption signal output pin. (Not connected)
70	WRQ	O	Interruption signal output pin.
71	RES	I	Reset input pin. This pin must be set low briefly after power is first applied.
72	DRF	O	Focus ON detect pin.
73	VDD5V	—	Microprocessor interface power supply.
74	VSS	—	Digital ground pin.
75	CONT6	I/O	General-purpose input/output pin 6.
76	CONT7	I/O	General-purpose input/output pin 7.
77	V/P	O	Rough servo/phase control automatic switching monitor output pin. “H” for rough servo and “L” for phase servo. (Not connected)

Pin No.	Pin Name	I/O	Description
78	FSEQ	O	Synchronization signal detection output pin. Outputs a high level when the synchronization signal detected from the EFM signal and the internally generated synchronization signal agree. (Not connected)
79	DEFECT	I/O	Defect pin. Which becomes an input pin after reset and can be controlled externally. This becomes the defect monitor pin under control by command. (Not connected)
80	EFMO	O	EFM signal output pin. (Not connected)

# MECHANICAL EXPLODED VIEW 1/1



## MECHANICAL PARTS LIST 1/1

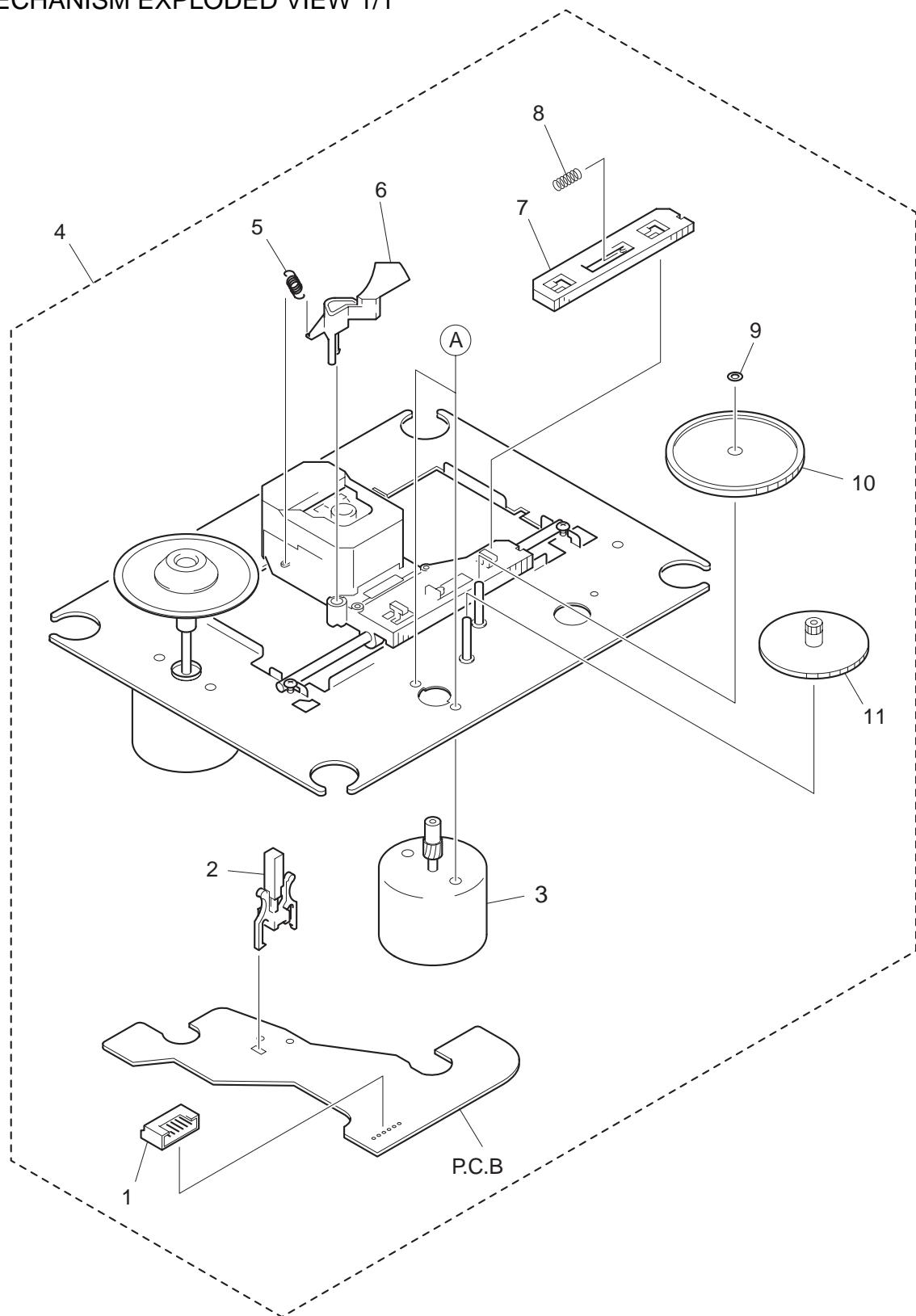
DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。  
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	84-ZG1-225-010		BELT,SQ1.0-63.3	20	81-ZG1-255-110		PLATE,MAGNET MK2<EXCEPT ZD8RN1DM>
2	84-ZG1-673-010		F-CABLE,5P 1.25 210MM BLACK N <EXCEPT ZD8RN1DM,ZD8RNDM>	21	83-ZG3-604-010		RING,MAG 2
2	84-ZG1-672-010		F-CABLE,5P 1.25 210MM WHITE N <ZD8RN1DM,ZD8RNDM>	22	83-ZG3-213-010		LVR,SW
3	87-045-364-010		MOTOR(BCH3B14)	23	84-ZG1-208-210		LEVER,CAM<YKZD8RDF>
4	84-ZG1-267-010		PULLEY,LOAD MO 8 <EXCEPT YKZD8RDF,ZD8RD>	23	84-ZG1-266-010		LEVER,CAN 8<EXCEPT YKZD8RDF>
4	81-ZG1-212-010		PULLY,LOAD MO<YKZD8RDF,ZD8RD>	24	84-ZG1-205-210		GEAR,TRAY (*)
5	84-ZG1-238-010		GEAR,WORM N	25	81-ZG1-291-110		GEAR,TRAY RELAY NO3
6	84-ZG1-248-010		SPR-C,WORM	26	84-ZG1-206-110		GEAR,RELAY<YKZD8RDF>
7	84-ZG1-239-210		PULLY,WORM N	27	84-ZG1-207-010		PULLEY,RELAY
8	84-ZG1-008-210		TRAY,NO3<ZD8RD>	28	84-ZG1-209-010		BELT,SQ1.8-117.7
8	8A-ZG1-001-010		TRAY,NO3 BLU<EXCEPT ZD8RD>	29	84-ZG1-203-410		GEAR,MAIN CAM<ZD8RNDM>
9	8A-ZG1-210-010		HLDL,MAGNET 23<YKZD8RDF>	29	84-ZG1-215-410		GEAR,MAIN CAM BLU<EXCEPT ZD8RNDM>
9	84-ZG1-243-210		HLDL,MAGNET N(J) <YZD8RDJM,ZD8RMDJM,YZD8RMDJM>	30	84-ZG1-011-010		REFLECTOR,CD
9	84-ZG1-289-010		HLDL,MAGNET NAT<ZD8RNDM>	31	84-ZG1-216-310		SLIDE,MECHA CAM YEL <EXCEPT ZD8RN1DM,ZD8RNDM>
9	81-ZG1-277-310		HLDL,MAGNET N <ZD8RN1DM,ZD8RDM,YZD8RDM,ZD8RD>	31	84-ZG1-204-310		SLIDER,MECHA CAM<ZD8RNDM>
10	84-ZG1-259-010		SPR-P,WORM	32	84-ZG1-286-010		CHAS,MECHA NAT<ZD8RNDM>
11	84-ZG1-221-010		GEAR,MAIN TT<YKZD8RDF>	32	84-ZG1-201-410		CHAS,MECHA<EXCEPT ZD8RNDM>
11	84-ZG1-269-010		GEAR,MAIN TT 4<EXCEPT YKZD8RDF>	33	M8-ZZK-C90-070		KSM-880CAB
12	84-ZG1-224-010		LEVER,TT<EXCEPT ZD8RNDM>	A	87-067-703-010		TAPPING SCREW, BVT2+3-10 <EXCEPT ZD8RN1DM,ZD8RNDM>
12	84-ZG1-288-010		LEVER,TT NAT<ZD8RNDM>	B	87-067-981-010		BVT2+3-6 BLK
13	8A-ZG1-002-010		TURN TABLE,NO1 BLU<EXCEPT ZD8RD>	C	87-251-070-410		U+2.6-3
13	84-ZG1-005-210		TURNTABLE,NO1(*)<ZD8RD>				
14	81-ZG1-239-010		S-SCREW,TT				
15	8A-ZG1-201-010		S-SCREW,MECH 880				
16	85-NFT-611-110		FF-CABLE 16P-1.0				
17	84-ZG1-299-210		HLDL,MECHA NO3<EXCEPT ZD8RNDM>				
17	8A-ZG1-203-010		HLDL,MECHA NO3 NAT<ZD8RNDM>				
18	87-045-305-010		MOTOR, RF-500TB DC-5V (2MA)				
19	84-ZG1-211-010		SPR-E CAM S				
20	84-ZG1-285-010		PLATE,MAGNET BLK<ZD8RN1DM>				

COLOR NAME TABLE

Basic color symbol	Color	Basic color symbol	Color	Basic color symbol	Color
B	Black	C	Cream	D	Orange
G	Green	H	Gray	L	Blue
LT	Transparent Blue	N	Gold	P	Pink
R	Red	S	Silver	ST	Titan Silver
T	Brown	V	Violet	W	White
WT	Transparent White	Y	Yellow	YT	Transparent Yellow
LM	Metallic Blue	LL	Light Blue	GT	Transparent Green
LD	Dark Blue	DT	Transparent Orange		

# CD MECHANISM EXPLODED VIEW 1/1



## CD MECHANISM PARTS LIST 1/1

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。  
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	91-564-722-110		CONN, PIN 6P	8	92-647-742-010		SPRING COMPRESSION
2	91-572-085-110		LEAF SWITCH	9	93-321-813-110		POLI WASHER
3	9X-264-655-010		SL MOTOR ASSY	10	92-647-407-010		GEAR A
4	M8-ZZK-C90-070		KSM-880CAB	11	92-647-408-020		GEAR B
5	92-647-416-020		SPRING EXTENSION	A	93-713-786-510		SCREW, +P2-3
6	92-647-595-020		SHUTTER B				
7	92-647-732-010		NS SLIDE RACK				

# REFERENCE NAME LIST

## ELECTRICAL SECTION

DESCRIPTION	REFERENCE NAME
ANT	ANTENNAS
C-	CHIP
C-CAP	CAP, CHIP
C-CAP TN	CAP, CHIP TANTALUM
C-COIL	COIL, CHIP
C-DI	DIODE, CHIP
C-DIODE	DIODE, CHIP
C-FET	FET, CHIP
C-FOTR	FILTER, CHIP
C-JACK	JACK, CHIP
C-LED	LED, CHIP
C-RES	RES, CHIP
C-SFR	SFR, CHIP
C-SLIDE SW	SLIDE SWITCH, CHIP
C-SW	SWITCH, CHIP
C-TR	TRANSISTOR, CHIP
C-VR	VOLUME, CHIP
C-ZENER	ZENER, CHIP
CAP, CER	CAP, CERA-SOL
CAP, E	CAP, ELECT
CAP, M/F	CAP, FILM
CAP, TC	CAP, CERA-SOL
CAP, TC-U	CAP, CERA-SOL SS
CAP, TN	CAP, TANTALUM
CERA FIL	FILTER, CERAMIC
CF	FILTER, CERAMIC
DL	DELAY LINE
E/CAP	CAP, ELECT
FILT	FILTER
FLTR	FILTER
FUSE RES	RES, FUSE
MOT	MOTOR
P-DIODE	PHOTO DIODE
P-SNSR	PHOTO SENSER
P-TR	PHOTO TRANSISTOR
POLY VARI	VARIABLE CAPACITOR
PPCAP	CAP, PP
PT	POWER TRANSFORMER
PTR, RES	PTR, MELF
RC	REMOTE CONTROLLER
RES NF	RES, NON-FLAMMABLE
RESO	RESONATOR
SHLD	SHIELD
SOL	SOLENOID
SPKR	SPEAKER
SW, LVR	SWITCH, LEVER
SW, RTRY	SWITCH, ROTARY
SW, SL	SWITCH, SLIDE
TC CAP	CAP, CERA-SOL
THMS	THERMISTOR
TR	TRANSISTOR
TRIMMER	CAP, TRIMMER
TUN-CAP	VARIABLE CAPACITOR
VIB, CER	RESONATOR, CERAMIC
VIB, XTAL	RESONATOR, CRYSTAL
VR	VOLUME
ZENER	DIODE, ZENER

## MECHANICAL SECTION

DESCRIPTION	REFERENCE NAME
ADHESIVE	SHEET ADHESIVE
AZ	AZIMUTH
BAR-ANT	BAR-ANTENNA
BAT	BATTERY
BATT	BATTERY
BRG	BEARING
BTN	BUTTON
CAB	CABINET
CASS	CASSETTE
CHAS	CHASSIS
CLR	COLLAR
CONT	CONTROL
CRSR	CURSOR
CU	CUSHION
CUSH	CUSHION
DIR	DIRECTION
DUBB	DUBBING
FL	FRONT LOADING
FLY-WHL	FLYWHEEL
FR	FRONT
FUN	FUNCTION
G-CU	G-CUSHION
HDL	HANDOL
HIMERON	CLOTH
HINGE, BAT	HINGE, BATTERY
HLDR	HOLDER
HT-SINK	HEAT SINK
IB	INSTRUCTION BOOKLET
IDLE	IDLER
IND, L-R	INDICATOR, L-R
KEY, CONT	KEY, CONTROL
KEY, PRGM	KEY, PROGRAM
KNOB, SL	KNOB, SLIDE
LBL	LABEL
LID, BATT	LID, BATTERY
LID, CASS	LID, CASSETTE
LVR	LEVER
P-SP	P-SPRING
PANEL, CONT	PANEL, CONTROL
PANEL, FR	PANEL, FRONT
PRGM	PROGRAM
PULLY, LOAD MO	PULLY, LOAD MOTOR
RBN	RIBBON
S-	SPECIAL
SEG	SEGMENT
SH	SHEET
SHLD-SH	SHIELD-SHEET
SL	SLIDE
SP	SPRING
SP-SCREW	SPECIAL-SCREW
SPACER, BAT	SPACER, BATTERY
SPR	SPRING
SPR-P	P-SPRING
SPR-PC-PUSH	P-SPRING, C-PUSH
T-SP	T-SPRING
TERM	TERMINAL
TRIG	TRIGGER
TUN	TUNING
VOL	VOLUME
W	WASHER
WHL	WHEEL
WORM-WHL	WORM-WHEEL



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